

Remark

Applicants respectfully request reconsideration of this application as amended.
No Claims have been amended. No Claims have been canceled. Therefore, claims 1-32 are now presented for examination.

35 U.S.C. §102 Rejection***Hunter***

The Examiner has rejected claims 1-32 under 35 U.S.C. §102 (e) as being anticipated by Hunter, U.S. Publication No. 2002/0059197 A1 ("Hunter").

Notwithstanding whatever may be meant by the spirit of the design of Hunter, Applicants understand the Examiner to suggest that the differences in terminology between Hunter and the pending claims do not correspond to a difference in substance.

Applicants shall endeavor to more clearly describe the differences between Hunter and the express limitations of Claim 1. Hunter, as shown in Figure 6 produces a 16-bit hash index." (step 610, para. 61, line 4), based on a current mask and the masked search key (para. 65, lines 2-5). The hash bin index is applied to search a hash bin (step 630) to find the most appropriate forwarding database entry. This would appear to correspond to a forwarding address that would come out of a routing table as recited in Claim 1.

Two tests are applied to the result at step 640 based on the hash bin entries mask length and its address information. If the result is not declared to be a match, then the hash index is modified (steps 650, 660, 620) and the search is tried again. If it is a match,

then the process ends. Page 6 appears to discuss issues related to the iterative matching process of Figure 6.

Referring to Claim 1, after receiving a search key, it recites, "retrieving an encoded mask vector from a mask table." Hunter does not retrieve a encoded mask vector but creates a hash index using the current mask. Hunter does not appear to explain where this current mask comes from, but there is clearly no suggestion that it be obtained from an encoded mask vector. Claim 1, then recites, "determining a set of masks using the encoded mask vector that when applied to the search key are known to have a potential for matching an entry in a routing table." Hunter does not determine a set of masks and does not use an encoded mask vector. Hunter generates a hash index using one mask. If there is no match, then step 660 shortens that same mask and generates another hash index (step 620) and so on until a mask is found.

Claim 1, further recites "forming a routing table query based upon the search key and a mask of the set of masks, indicated by the encoded mask vector to be the longest mask of the set of masks and applying the routing table query to the routing table." In Hunter, the routing table query would appear to correspond to applying the hash index to the hash bin (630).

Accordingly, Applicants find nothing similar to the elements in Claim 1 that relate to the encoded mask vector, to determining a set of masks from the encoded mask vector and to a set that is known to have a potential for matching an entry in the routing table. Applicants have accordingly suggested that the claims are allowable over Hunter.

The Examiner suggests that Hunter discloses decimating a mask. Claim 1 does not recite decimating a mask but " determining a set of masks using the encoded mask

vector." The Examiner further suggests that Hunter discloses identifying a longest matching prefix of a given address in a forwarding database/routing table. There is more to the preferred embodiment than a longest match search. Claim 1 merely recites "a mask of the set of masks, indicated by the encoded mask vector to be the longest mask of the set of masks."

The Examiner further suggests that Hunter discloses that a hash index is generated bases upon a mask and a masked search key and that this relates to an "encoded mask table." The mask table of Claim 1, however, provides an encoded mask vector from which a set of masks is determined. Hunter, as mentioned above, uses a current mask and applies it to a search. If there is no match, then the current mask is shortened. There is no set of masks and Hunter's current mask is not apparently generated from an encoded mask vector.

Conclusion

Applicants respectfully submit that the rejections have been overcome by the amendment and remark, and that the claims as amended are now in condition for allowance. Accordingly, Applicants respectfully request the rejections be withdrawn and the claims as amended be allowed.

Invitation for a Telephone Interview

The Examiner is requested to call the undersigned at (303) 740-1980 if there remains any issue with allowance of the case.

Request for an Extension of Time

Applicants respectfully petition for an extension of time to respond to the outstanding Office Action pursuant to 37 C.F.R. § 1.136(a) should one be necessary. Please charge our Deposit Account No. 02-2666 to cover the necessary fee under 37 C.F.R. § 1.17(a) for such an extension.

Charge our Deposit Account

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

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